**Extended Abstract (with Tentative Tables) for:**

# Trends in Occupational Differentiation in the United States by Race/Ethnicity, Sex, and Region, 1980-2000

**by**

**Omer R. Galle and George J. Lara***
**University of Texas at Austin**

## Commentary to Accompany Tables and Figures to be Used in the Presentation

This page and the following pages contain a brief discussion of the tables (and figures) that accompany this brief text. Between the two things (the discussion and the tables/figures), we hope the reader will get a reasonable sense of what the final and completed paper will be like.

**Figure 1.** The first panel of Figure 1 is a listing of the broad occupational categories that were "traditionally" used in sociological analysis of occupational differentiation and occupational inequality while using the US Census information from the population censuses in 1940, 1950, 1960, and 1970. Several of the classic articles in this area used these occupational categories, often combining the two "Farm Worker" categories into one broad category (see for example, Siegel, 1965; Johnson and Sell, 1976; Fossett, Galle, and Kelly, 1986).

The second panel of Figure 1 shows the occupational categories used by the census bureau from 1980 to the present time. Shown first in this panel are the six broad categories, and after this, the somewhat more detailed thirteen categories from the census occupational codes.

The third panel of Figure 1, then, shows the combinations of the 13 somewhat more detailed occupational categories into a grouping of nine categories that are used in the following analysis of this paper. We chose nine in part because earlier analyses using the early occupational categories ended up with nine categories. Thus, in order to keep a similarity between this and earlier analyses, it seemed prudent to keep roughly the same number of categories in this analysis. Measures such as the ones used in the analysis are somewhat susceptible to large changes in the size and number of categories under observation.

**Table 1.** This table is a straightforward illustration of how the Index of Dissimilarity is calculated, using data from the 1940 Census of Population of the United States. The1940 data are used here in part to illustrate the potential differential outcomes from using a different measure, the Index of Net Difference on the same kinds of data. Here, this measure indicates (on a scale from zero to one hundred) the degree of "dissimilarity of the distributions of the two populations across these occupational categories. A score of zero means both populations have exactly similar distributions across the occupational categories; a score of 100 means that where there are blacks in an occupational category, there are no whites, and vice-versa.

**Table 2.** This table illustrates the computation of the Index of Net Difference, as suggested by Lieberson (1976). This is a measure that requires at least "ordinal" data (i.e., rank ordered from highest to lowest). As can be noted from a comparison of this table with the first table, the "value" of the number for this data set is very similar, although the interpretation of the two numbers are a bit different. Here, the scale runs from minus 100 to plus 100. Zero means that whenever a randomly chosen pair (one black and one white) of persons are chosen from the labor

force, the probability that the white worker has an occupation of higher status that the black worker is zero; if the number is positive (as the one shown in table 2) it means that the likelihood is that the white worker will be in an occupational category of higher status that the black worker (here, 45% of the time).

**Table 3.** This table shows how changes over time in two distributions can be interpreted somewhat differently by the two measures illustrated in Tables 1 and 2. Using the Index of Dissimilarity, it appears as though the two occupational distributions (of white and black men) are becoming more similar, since the index declines from 43.1 to 40.8. However, when the ordinal ranking is taken into account, it appears to be the case that although large percentages of both the black and white male population moved out of agriculture between 1940 and 1950, the black workers who moved out of agriculture moved into lower "status" urban jobs than did white workers moving out of agriculture, thereby bringing about an increase in the Index of Net Difference from 45.1 to 46.8. Thus, it can be argued that occupational "inequality" actually increased in this time period (using these hypothetical distributional changes).

**Figure 2.** This figure gives the computational formula for computing the Redistribution Index for the case of two populations, and for the case of more than two populations. Although this measure goes back to using the Index of Dissimilarity for its construction, thereby losing the "leverage" of ordinal rankings in its construction, it does have the strong advantage of giving an overall measure of "system change" in case of multiple (more than two) sub-population comparisons. The number created by the Redistribution Index gives the "overall percentage" of population in a given system that would have to be moved from one category to another in order to achieve complete similarity of all populations compared. That is, all sub-populations' distributions across the categories would be proportionally the same, and would match the distribution for the total population (the one occurring when all subcategories are added up together).

**Table 4.** This table is presented to illustrate the utilization of the Redistribution Index. Here, percentage distributions for black and white men and women across 10 occupational categories are displayed for the United States in 1940 and in 1970. As this table is perused, several things become clear. First, it is clear that in general, the occupational distributions became more similar between 1940 and 1970 when comparing the four distributions at the two points in time. Comparing the indexes of dissimilarity between the various categories in 1940 and 1970 (above and below the diagonal in panel C of the table) also shows this trend. In each and every case, the index for 1970 is smaller than what it was in 1940. At the same time, however, the composition of the labor force has changed substantially. In 1940, men made up over 75% of the black/white employed labor force. By 1970, men made up less than 63 % of the black/white labor force. Thus, when taking into account both the changes in the race/sex specific occupational distributions and the changing composition of the labor force (many more women), the two forces interact to bring about a situation of virtually no change over the 30 year period. In 1940, 20 percent (19.8) of the employed work force would have to be moved from one occupational category to another in order for all four groups (i. e., white males, white females, black males, black females) to have the same occupational distributions (i.e., 7.5% in Professionals, 8.4% in Managers, etc.). In 1970, it would have still required a shifting of 20 percent (20.5) of the employed work force to bring about complete similarity among the four groups (i.e., 14.9% Professionals, 8.3 Managers, etc.). In this way, the Redistribution Index allows one to take into

account both the "pair-wise" comparisons between specific groups, and the changing composition of the overall labor force.

These first two figures and four tables are a prologue to the major analysis of the paper, which is (at least) introduced in Tables 5 through 7. When we say prologue, we mean that the analysis is still ongoing, and will be more advanced by meeting time. Nonetheless, the findings to date are sufficiently interesting that we are hoping the reader will be inclined to want to see what will eventually follow.

**Table 5.** This table simply exhibits the percentage distributions of the population across broad occupational categories by sex composition of occupation, and regional differences in total occupational distributions. Several things may be gleaned from this table. First, it is clear that there have been changes in occupational distributions, with relatively more persons in the top category of "managerial and professional service occupations" as one moves from 1980 to 2000 in the table. There are also relatively fewer in other categories, such as "administrative support occupations." Second, it is clear that the labor force is continuing to move towards more equity in overall labor force participation between men and women. In 1980, 57 percent of the employed labor force was male, and by 2000, 53 percent was male. It is also clear that there are some categories which are overwhelmingly male or female—for males the three categories with the most "occupational crowding" by gender are "protective service occupations," "precision, production, repair and craft occupations," and "farming, forestry, and fishery occupations." For women, the crowding occurs primarily in "administrative support occupations," and in "other service, including private household occupations." In both of those categories, the level of "crowding" has diminished over the 20 year period. [There is also either a major "coding" change in 2000 regarding the "technicians and related support occupations," a coding error on our part regarding this category, or there has been a major restructuring of this category. Clearly, the major change in this category in 2000 as compared to 1980 ad 1990 needs further checking on our part—this will be cleared up very soon, and certainly before the spring.] Finally, it is clear that there are some regional variations in occupational distributions as well. The Northeast and the West have larger proportions of their work force in the top occupational category (managerial and professional), while the Midwest and South have slightly more workers in the "precision, production, repair & craft occupations" category. Other differences in this table are worth exploring further, but time limits us here.

**Table 6.** This table shows the proportional distribution by race/ethnicity of the employed civilian labor force at the three relevant time points. A variety of points are apparent from this table. First of all, it is clear that there has been a quite substantial decline in the "whiteness" of the labor force over this 20 year period. In 1980, 83% of the employed civilian labor force was white; by 2000, only 76% was so classified. The big gainers in the work force, relatively speaking, are the Hispanics and the Asians. In 1980, these two groups made up only 7.4 percent of the work force; by 2000, they comprised 13.7 percent, according to these data from the PUMS data sets. Equally interesting is the wide variations in regional compositions by race/ethnicity.

**Table 7.** The final table included in this extended "abstract" exhibits the measures of "inequality" or "differentiation" between the various groups examined in the paper. Here, the index of net difference for each race/ethnicity/sex category is calculated for the total US and each of the four major regions and for the three time periods. In addition, the Redistribution Index is calculated for each decade for the total US and for each region.

Looking first at the total United States for each decade, it is clear that the "dominance" of the white male category, in terms of higher socioeconomic status continues to fade. In 1980, any randomly chosen white male in the employed civilian labor force was almost 15 percent more likely to have an occupation of higher status than another randomly chosen employed person of some other race/ethnic/sex status. By 2000, this probability had shrunk from 15% to 6.5%. Indeed, if the results in this table are correct, the Asian male has, by 2000 overtaken the white male in terms of relative socioeconomic status in their occupational distributions. In addition, both white and Asian females appear to be, by 2000 well on the "positive" side of socioeconomic advantage when compared to all other race/ethnic/sex categories.

There are clearly some regional variations in these patterns, but time and space in this brief exposition limit us from exploring many of these further. Much more will be said of these in the final presentation. At this point, we need to note the other more problematic trends—those whose situation appears to be getting worse.

Clearly, the biggest "losers"—that is, the group that is gaining the least in terms of relative occupational status—are the Hispanic male population. In 1980, they were a close third, behind African American males and Hispanic females, in the competition for the least advantage regarding occupational socioeconomic status (-21.17, compared to -22.07 for Hispanic females and -23.01 for African American males). By the 2000 census, both African American and Hispanic females had made substantial progress, and African American males had made some progress in lifting their overall socioeconomic status scores. Hispanic males, on the other hand had regressed rather than progressed, moving from -21.17 in 1980 to -26.67 in 2000. Clearly, the great influx of Hispanics into the US employed civilian labor force is coming in towards the bottom of the socioeconomic occupational ladder. This is seen even more clearly, in the Western region, where the greatest growth of the Hispanic population has occurred, and the Index of Net Difference has reached a -33.03 by 2000. However, it must be noted that while somewhat lower, similar declines in relative socioeconomic status have occurred in all regions for Hispanic men. Interestingly, Hispanic women have not followed this same pattern of increasing inequality.

Looking at regional patterns, it should be noted that although it appears to be the case that the migration of African Americans into the Southern region reached new heights in the decade of the 1990s (Frey, 2004), it is apparently not because the region has suddenly (or even gradually) reversed its long held "standard" of having the highest levels of occupational inequality between African Americans and others in the work force. The South shows the highest levels of inequality for African American males in all three years of observation. The levels are declining to be sure, but even in 2000, only Hispanic men in the West and the Northeast show larger negative numbers in occupational inequality.

Finally, it is interesting to note that the overall level of "system-wide" differentiation appears to be declining from 1980 to 2000.Despite remaining at around 20 percent between 1940 and 1980 (Galle, 1998) for the United States as a whole, the Redistribution Index appears to be exhibiting some substantial decline over the last 20 years of the 20$^{th}$ century. By 2000, only around sixteen and a half percent of the overall work force would have to be moved from one large occupational category to another to achieve similar occupational distributions for each and every race-ethnic-sex category observed in these tables. The biggest regional decline appears to be in the Midwest, which almost matches the Northeast in the smallest index by 2000.

Much more discussion of the last three tables will be included in the final version of the paper, but this may give at least some taste of things to come.

**Works Cited in the Extended Abstract:**


Fossett, Mark A., Omer R. Galle, and William R. Kelly
1986 "Racial Occupational Inequality, 1940-1980: National and Regional Trends." *American Sociological Review* 51: 421-429.

Frey, William H.
2004 “The New Great Migration: Balck Americans’ Return to the South, 1956-2000.” *The Brookings Institution, Living Cities Census Series*, May.

Galle, Omer R.
1998 “Meditations on the Measurement of Occupational Inequality in a Multicultural Context: the United States, 1940-1990.” Unpublished paper.

Lieberson, Stanley
1975 "Rank-sum Comparisons Between Groups." Pp. 276-291 in David Heise, ed., *Sociological Methodology 1976*. San Francisco, CA: Jossey-Bass.

Siegel, Paul M.
1965 "On the Cost of Being a Negro." *Sociological Inquiry* 35: 41-57.

**Figure 1. Broad Major Occupational Categories Used by the US Census**

**(A) From 1940 through 1970:**

White Collar
- Professional, technical and kindred workers
- Managers, officials and proprietors
- Clerical and kindred workers
- Sales and kindred workers

Blue Collar
- Craftsmen, foremen, and kindred workers
- Operatives and kindred workers
- Service workers
- Laborers

Farm Workers
- Farm managers
- Farm laborers

**(B) From 1980 Onward**

A) Managerial and professional services
B) Technical, sales and administrative services
C) Service occupations
D) Precision, production, craft and repair occupations
E) Operators, fabricators, and laborers
F) Farming, forestry, and fisheries occupations

**1980 Categories in More Detail**

A) Managerial and professional services
  1) Executive, administrative, and managerial occupations
  2) Professional specialty occupations
B) Technical, sales and administrative services
  1) Technicians and related support occupations
  2) Sales occupations
  3) Administrative support occupations
C) Service occupations
  1) Protective service occupations
  2) Other service occupations, except protective service
  3) Private household occupations
D) Precision, production, craft and repair occupations
E) Operators, fabricators, and laborers
  1) Transportation and material moving occupations
  2) Machine operators, assemblers, and inspectors
  3) Handlers, equipment cleaners, helpers, and laborers
F) Farming, forestry, and fisheries occupations

**(C) The Occupational Categories to be used in our Analysis (1980-2000).**

| | |
|---|---|
| (A1 + A2) | Managerial and professional services |
| (B1) | Technicians and related support occupations |
| (C1) | Protective service occupations |
| (B2) | Sales occupations |
| (D) | Precision, production, craft, and repair occupations |
| (A3) | Administrative support occupations |
| (E) | Operators, fabricators, and laborers |
| (C2 + C3) | Other service occupations, except protective services, but including private household workers |
| (F) | Farming, forestry, and fishing occupations |

**Table 1. Computing the Index of Dissimilarity (Delta, or D)**

**Panel A: Employed Males in the US Labor Force by Race, 1940**

| Occupational Category | White Male Employed | | Black Male Employed | | Total (WM+BM) Employed | |
|---|---|---|---|---|---|---|
| **Professionals** | 1,818,233 | | 53,312 | | 1,871,545 | |
| **Managers** | 3,274,630 | | 37,240 | | 3,311,870 | |
| **Clerical** | 2,198,922 | | 35,013 | | 2,233,935 | |
| **Sales** | 2,094,174 | | 23,544 | | 2,117,718 | |
| **Craftsmen** | 4,814,327 | | 129,736 | | 4,944,063 | |
| **Operatives** | 5,822,253 | | 368,005 | | 6,190,258 | |
| **Laborers** | 2,329,507 | | 623,641 | | 2,953,148 | |
| **Service** | 1,861,541 | | 447,990 | | 2,309,531 | |
| **Farm** | 6,490,206 | | 1,202,242 | | 7,692,448 | |
| **Total*** | 30,703,793 | | 2,920,723 | | 33,624,516 | |

***The total employed labor force figures do not include the "occupation not reported" category.**

**Panel B: Percentage Distributions by Race and Occupation**

| White Males vs. Black Males | White Males | Black Males | Total (WM+BM) | Absolute Value of %WM - %BM |
|---|---|---|---|---|
| **Professionals** | 5.9 | 1.8 | 5.6 | 4.1 |
| **Managers** | 10.7 | 1.3 | 9.8 | 9.4 |
| **Clerical** | 7.2 | 1.2 | 6.6 | 6.0 |
| **Sales** | 6.8 | 0.8 | 6.3 | 6.0 |
| **Craftsmen** | 15.7 | 4.4 | 14.7 | 11.2 |
| **Operatives** | 19.0 | 12.6 | 18.4 | 6.4 |
| **Laborers** | 7.6 | 21.4 | 8.8 | 13.8 |
| **Service** | 6.1 | 15.3 | 6.9 | 9.3 |
| **Farm** | 21.1 | 41.2 | 22.9 | 20.0 |
| **Total*** | 100.0 | 100.0 | 100.0 | 86.1 |

**Panel C: Computing Formula for the Index of Dissimilarity (D, or Delta):**

$$D = \Sigma \mid W_i - B_i \mid / 2$$

Where: $W_i$ = the proportion of all white males in occupation i

$B_i$ = the proportion of all black males in occupation j

**Index of dissimilarity = (86.2)/2 = 43.1**

**Table 2. Computing the Index of Net Difference or ND**

**Panel A: Ranking of Broad Occupational Categories Based on Nam-Powers SES Scores**

| Occupational Category | Nam-Powers SES Score |
|---|---|
| 1) Professional, Technical, and Kindred Workers | 90 |
| 2) Managers, Officials, and Proprietors | 81 |
| 3) Clerical, Sales, and Kindred Workers | 71 |
| 4) Craftsmen, Foremen, and Kindred Workers | 58 |
| 5) Operatives and Kindred Workers | 45 |
| 6) Service Workers (including Private Household) | 34 |
| 7) Laborers (except Farm and Mine) | 20 |
| 8) Farmers and Farm Managers | 16 |
| 9) Farm Laborers and Farm Foremen | 6 |

**Panel B: Computation Formula for the Index of Net Difference**

$$ND = 100 * ( \Sigma W_i CB_i - \Sigma B_i CW_i )$$

**Where:**

- $W_i$ = the proportion of whites in occupation i,
- $B_i$ = the proportion of blacks in occupation i,
- $CW_i$ = the cumulated proportion of whites in occupations ranked below occupation i,
- $CB_i$ = the cumulated proportion of blacks in occupations ranked below occupation i,

**Panel C: Computing the Index of Net Difference for Black and White Employed Males, 1940**

| Distributions: | Proportional | | Cumulative | |
|---|---|---|---|---|
| Occupation | White Males | Black Males | White Males | Black Males |
| Professionals | 0.0592 | 0.0183 | 1.0000 | 1.0000 |
| Managers | 0.1067 | 0.0128 | 0.9408 | 0.9817 |
| Clerical | 0.0716 | 0.0120 | 0.8341 | 0.9690 |
| Sales | 0.0682 | 0.0081 | 0.7625 | 0.9570 |
| Craftsmen | 0.1568 | 0.0444 | 0.6943 | 0.9489 |
| Operatives | 0.1896 | 0.1260 | 0.5375 | 0.9045 |
| Laborers | 0.0759 | 0.2135 | 0.3479 | 0.7785 |
| Service | 0.0606 | 0.1534 | 0.2720 | 0.5650 |
| Farm | 0.2114 | 0.4116 | 0.2114 | 0.4116 |

**Panel D: Probabilities:**

**A. Black and White Male Being in the Same Occupational Category = .147**
**B. White Male Being in Higher Status Occupation Than Black Male = .652**
**C. Black Male Being in Higher Status Occucpation Than White Male = .201**

**Index of Net Difference = 100*(B - C) = 45.1**

**Table 3: Comparing Delta and ND in the Measurement of Change in the Distributions of Two Racial/Ethnic Groups Across Categories Over Time**

**Panel A: Hypothetical Changes in Occupational Distributions from 1940 to 1950**

| White Males vs. Black Males | | White Males | | Black Males | Total (WM+BM) | Absolute Value of %WM - %BM |
|---|---|---|---|---|---|---|
| **Professionals** | | 5.9 | | 1.8 | 5.6 | 4.1 |
| **Managers** | | 10.7 | | 1.3 | 9.8 | 9.4 |
| **Clerical** | (+2.6) | 9.8 | | 1.2 | 9.1 | 8.6 |
| **Sales** | (+2.7) | 9.5 | (+2.6) | 3.4 | 8.9 | 6.1 |
| **Craftsmen** | (+2.6) | 18.3 | (+5.2) | 9.6 | 17.6 | 8.7 |
| **Operatives** | (+2.6) | 21.6 | (+5.1) | 17.7 | 21.3 | 3.9 |
| **Laborers** | | 7.6 | (+5.1) | 26.5 | 9.2 | 18.9 |
| **Service** | | 6.1 | (+2.6) | 17.9 | 7.1 | 11.8 |
| **Farm** | (-10.5) | 10.6 | (-20.6) | 20.6 | 11.4 | 10.0 |
| **Total** | | 100.0 | | 100.0 | 100.0 | 81.6 |

**Panel B: Computing Indexes of Dissimilarity and Net Difference at Time One and Time Two**

| | Time 1 | | Time 2 |
|---|---|---|---|
| **Index of Dissimilarity** | 43.1 | | 40.8 |
| **Index of Net Difference** | 45.1 | | 46.8 |

**Figure 2. Computational Formulas for the Redistribution Index**

**A: Pairwise Comparison Case**

$$RI = 2 * Q * (1 - Q) * D$$

| | | |
|---|---|---|
| **Where:** | **Q =** | the proportion of the total population in one category |
| | **(1 - Q) =** | the proportion of the total population in 2nd category |
| | **D =** | the Index of Dissimilarity between the two categories of population |

**B: Multiple Group Comparison Case**

$$RI = \sum_{i} [Q_i * (1 - Q_i) * D_i]$$

| | | |
|---|---|---|
| **Where** | $D_i$ = | the Index of Dissimilarity between category I and the rest of the population except for the ith group |
| | **and** | |
| | $Q_i$ = | the proportion of the population in category i |

**Table 4. Black/White Occupational "Inequality" in the U.S. Labor Force by Sex and Race, 1940-1970**

| A :1940 | | | | | |
|---|---|---|---|---|---|
| % Distributions by Occupation for: | Total * (White plus Black) Labor Force | White | | Black | |
| | | Male | Female | Male | Female |
| Professionals | 7.5 | 5.9 | 14.8 | 1.8 | 4.3 |
| Managers | 8.4 | 10.6 | 4.4 | 1.3 | 0.7 |
| Clerical | 10.3 | 7.2 | 25.0 | 1.2 | 0.9 |
| Sales | 6.5 | 6.8 | 8.2 | 0.8 | 0.5 |
| Craftsmen | 11.3 | 15.7 | 1.1 | 4.4 | 0.2 |
| Operatives | 18.5 | 19.0 | 20.6 | 12.6 | 6.3 |
| Laborers | 6.8 | 7.6 | 0.9 | 21.4 | 0.8 |
| Service: | | | | | |
| Domestic | 4.7 | 0.2 | 11.1 | 2.9 | 59.9 |
| Other | 7.7 | 5.9 | 11.6 | 12.4 | 10.4 |
| Farm | 18.3 | 21.1 | 2.3 | 41.2 | 16.0 |
| | | | | | |
| Total % | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| | | | | | |
| Proportion in each Race/Sex Category | | 0.689 | 0.212 | 0.065 | 0.034 |
| | | | | | |
| B :1970 | | | | | |
| Professionals | 14.9 | 15.1 | 16.3 | 5.8 | 11.4 |
| Managers | 8.3 | 12.0 | 3.9 | 2.9 | 1.4 |
| Clerical | 17.9 | 7.6 | 37.0 | 8.1 | 20.7 |
| Sales | 7.1 | 7.4 | 8.0 | 2.0 | 2.6 |
| Craftsmen | 13.9 | 21.8 | 1.8 | 15.4 | 1.4 |
| Operatives | 17.6 | 18.6 | 14.0 | 29.6 | 16.4 |
| Laborers | 4.5 | 5.7 | 0.9 | 15.7 | 1.5 |
| Service: | | | | | |
| Domestic | 1.5 | 0.0 | 2.1 | 0.4 | 17.9 |
| Other | 11.2 | 7.3 | 15.3 | 15.6 | 25.4 |
| Farm | 3.1 | 4.5 | 0.7 | 4.5 | 1.3 |
| | | | | | |
| Total % | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| | | | | | |
| Proportion in each Race/Sex Category | | 0.569 | 0.333 | 0.054 | 0.044 |
| | | | | | |
| C : Comparative Statistics | | | | | |
| Pair-wise Deltas (1940 above & 1970 below diag.) | White Males | | | 46.4 | 43.1 | 64.3 |
| | White Females | | 42.0 | | 63.4 | 62.5 |
| | Black Males | | 30.1 | 49.0 | | 59.5 |
| | Black Females | | 49.1 | 31.0 | 45.9 | |
| Delta for each category against all others | | 1940 | 35.2 | 45.9 | 43.0 | 60.0 |
| | | 1970 | 36.4 | 38.9 | 30.6 | 34.6 |
| Redistribution Index | | 1940 | 19.8 | | | |
| | | 1970 | 20.5 | | | |

**Table 5. Occupational Information, Employed Civilian Labor Force--Total and Regions, USA**

**Panel A: 1980**

| Percentage Distributions of Total Employed Civilian Labor Force by Broad Occupational Category for: | Total USA | | | Regional Occupational Distributions | | | |
|---|---|---|---|---|---|---|---|
| | Occup. Comp. | Sex Comp. | | | | | |
| | | Male | Female | Northeast | Midwest | South | West |
| Managerial & professional services | 22.95 | 58.90 | 41.10 | 24.56 | 21.53 | 21.83 | 24.68 |
| Technicians & related support occupations | 3.21 | 56.92 | 43.08 | 3.20 | 2.93 | 3.20 | 3.57 |
| Protective service occupations | 1.62 | 88.73 | 11.27 | 1.92 | 1.44 | 1.55 | 1.62 |
| Sales occupations | 9.87 | 51.95 | 48.05 | 9.40 | 9.58 | 9.96 | 10.61 |
| Precision, production, repair, & craft occs | 12.80 | 92.15 | 7.85 | 11.63 | 12.88 | 13.69 | 12.59 |
| Administrative support occupations | 18.00 | 22.83 | 77.17 | 19.72 | 17.45 | 17.04 | 18.25 |
| Operators, fabricators, & laborers | 18.68 | 72.50 | 27.50 | 17.91 | 20.63 | 20.13 | 14.75 |
| Other service occs, including private house | 11.14 | 35.20 | 64.80 | 10.80 | 11.85 | 10.68 | 11.39 |
| Farming, forestry, & fishery occupations | 1.74 | 86.20 | 13.80 | 0.85 | 1.71 | 1.91 | 2.53 |
| Total | 100.00 | 56.77 | 43.23 | 100.00 | 100.00 | 100.00 | 100.00 |

**Panel B: 1990**

| Percentage Distributions of Total Employed Civilian Labor Force by Broad Occupational Category for: | Total USA | | | Regional Occupational Distributions | | | |
|---|---|---|---|---|---|---|---|
| | Occup. Comp. | Sex Comp. | | | | | |
| | | Male | Female | Northeast | Midwest | South | West |
| Managerial & professional services | 27.04 | 50.95 | 49.05 | 29.39 | 25.42 | 25.91 | 28.30 |
| Technicians & related support occupations | 3.90 | 54.59 | 45.41 | 3.91 | 3.70 | 3.90 | 4.11 |
| Protective service occupations | 1.86 | 84.85 | 15.15 | 2.18 | 1.55 | 1.94 | 1.79 |
| Sales occupations | 11.42 | 51.44 | 48.56 | 11.03 | 11.03 | 11.81 | 11.64 |
| Precision, production, repair, & craft occs | 10.96 | 90.64 | 9.36 | 9.96 | 11.17 | 11.58 | 10.78 |
| Administrative support occupations | 17.02 | 22.84 | 77.16 | 18.40 | 16.76 | 16.36 | 16.98 |
| Operators, fabricators, & laborers | 15.24 | 73.88 | 26.12 | 13.49 | 17.48 | 16.16 | 13.02 |
| Other service occs, including private house | 10.88 | 36.88 | 63.12 | 10.77 | 11.31 | 10.55 | 11.02 |
| Farming, forestry & fishery occupations | 1.68 | 85.10 | 14.90 | 0.87 | 1.59 | 1.81 | 2.37 |
| Total | 100.00 | 53.88 | 46.12 | 100.00 | 100.00 | 100.00 | 100.00 |

**Panel C: 2000**

| Percentage Distributions of Total Employed Civilian Labor Force by Broad Occupational Category for: | Total USA | | | Regional Occupational Distributions | | | |
|---|---|---|---|---|---|---|---|
| | Occup. Comp. | Sex Comp. | | | | | |
| | | Male | Female | Northeast | Midwest | South | West |
| Managerial & professional services | 31.22 | 50.66 | 49.34 | 33.87 | 29.26 | 30.08 | 32.95 |
| Technicians & related support occupations | 3.60 | 15.88 | 84.12 | 4.09 | 3.70 | 3.61 | 3.01 |
| Protective service occupations | 2.09 | 80.40 | 19.60 | 2.40 | 1.75 | 2.15 | 2.10 |
| Sales occupations | 11.00 | 50.57 | 49.43 | 10.69 | 10.77 | 11.28 | 11.07 |
| Precision, production, repair, & craft occs | 11.15 | 90.26 | 9.74 | 9.24 | 11.63 | 12.07 | 10.80 |
| Administrative support occupations | 13.45 | 25.46 | 74.54 | 13.67 | 13.51 | 13.33 | 13.39 |
| Operators, fabricators, & laborers | 15.40 | 66.38 | 33.62 | 14.48 | 17.53 | 15.62 | 13.40 |
| Other service occs, including private house | 11.42 | 43.72 | 56.28 | 11.27 | 11.30 | 11.19 | 12.07 |
| Farming, forestry & fishery occupations | 0.68 | 80.71 | 19.29 | 0.29 | 0.55 | 0.67 | 1.19 |
| Total | 100.00 | 52.88 | 47.12 | 100.00 | 100.00 | 100.00 | 100.00 |

**Table 6. Geographical Distribution of Employed Civilian Labor Force for the Total US and Each of the Four Regions, by Year**

**1980**

| Percentage Distribution Across Regions by Race/Ethnicity | Northeast | Midwest | South | West | Total USA | Northeast | Midwest | South | West |
|---|---|---|---|---|---|---|---|---|---|
| White | 86.74 | 90.05 | 78.17 | 77.48 | 82.97 | 24.13 | 27.01 | 30.28 | 18.58 |
| African-American | 7.86 | 7.29 | 15.94 | 4.47 | 9.64 | 18.82 | 18.81 | 53.14 | 9.23 |
| Hispanic | 4.18 | 1.95 | 5.27 | 12.78 | 5.69 | 16.95 | 8.53 | 29.79 | 44.73 |
| Asian | 1.22 | 0.71 | 0.62 | 5.27 | 1.71 | 16.55 | 10.36 | 11.70 | 61.39 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 23.08 | 24.88 | 32.14 | 19.90 |

**1990**

| Percentage Distribution Across Regions by Race/Ethnicity | Northeast | Midwest | South | West | Total USA | Northeast | Midwest | South | West |
|---|---|---|---|---|---|---|---|---|---|
| White | 82.67 | 89.04 | 75.54 | 71.06 | 79.37 | 22.33 | 27.05 | 31.64 | 18.98 |
| African-American | 8.82 | 7.29 | 15.98 | 4.49 | 9.91 | 19.07 | 17.74 | 53.59 | 9.60 |
| Hispanic | 5.87 | 2.52 | 7.16 | 16.97 | 7.85 | 16.05 | 7.73 | 30.36 | 45.86 |
| Asian | 2.64 | 1.15 | 1.32 | 7.48 | 2.87 | 19.74 | 9.68 | 15.27 | 55.31 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 21.44 | 24.11 | 33.24 | 21.20 |

**2000**

| Percentage Distribution Across Regions by Race/Ethnicity | Northeast | Midwest | South | West | Total USA | Northeast | Midwest | South | West |
|---|---|---|---|---|---|---|---|---|---|
| White | 79.79 | 86.86 | 71.74 | 67.26 | 76.08 | 20.34 | 28.07 | 32.99 | 18.60 |
| African-American | 8.98 | 7.58 | 16.46 | 4.25 | 10.25 | 16.97 | 18.17 | 56.13 | 8.72 |
| Hispanic | 7.14 | 3.73 | 9.69 | 19.60 | 9.82 | 14.11 | 9.35 | 34.53 | 42.00 |
| Asian | 4.09 | 1.82 | 2.12 | 8.89 | 3.85 | 20.61 | 11.63 | 19.22 | 48.54 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 19.39 | 24.59 | 34.98 | 21.04 |

**Table 7. Indexes of Net Difference and Redistribution for the Total US and Each Region, by Year**

**For 1980**

| Indexes of Net Difference for: | Northeast | Midwest | South | West | Total US |
|---|---|---|---|---|---|
| White Males vs All Others | 14.33 | 10.60 | 17.54 | 17.82 | 14.91 |
| Black Males vs All Others | -17.67 | -17.52 | -28.79 | -11.57 | -23.01 |
| Hispanic Males vs All Others | -22.60 | -22.75 | -13.06 | -28.87 | -21.17 |
| Asian Males vs All Others | 15.17 | 26.28 | 21.51 | 2.55 | 11.04 |
| White Females vs All Others | -5.58 | -5.39 | 1.51 | -1.57 | -2.58 |
| Black Females vs All Others | -20.86 | -12.70 | -25.61 | -12.99 | -21.07 |
| Hispanic Females vs All Others | -23.20 | -20.36 | -17.41 | -28.00 | -22.07 |
| Asian Females vs All Others | 2.35 | 0.88 | 1.09 | -7.47 | -2.29 |
| **Total Redistribution Index** | 18.26 | 20.45 | 20.22 | 20.72 | 19.49 |

**For 1990**

| Indexes of Net Difference for: | Northeast | Midwest | South | West | Total US |
|---|---|---|---|---|---|
| White Males vs All Others | 8.58 | 4.20 | 11.61 | 13.34 | 9.29 |
| Black Males vs All Others | -17.12 | -16.33 | -26.40 | -7.72 | -20.81 |
| Hispanic Males vs All Others | -26.06 | -24.80 | -19.64 | -33.97 | -26.36 |
| Asian Males vs All Others | 8.01 | 21.39 | 12.67 | 1.71 | 8.41 |
| White Females vs All Others | 1.88 | 0.83 | 7.18 | 8.31 | 4.51 |
| Black Females vs All Others | -14.06 | -9.19 | -19.27 | -4.84 | -15.02 |
| Hispanic Females vs All Others | -21.77 | -15.76 | -14.72 | -24.72 | -19.47 |
| Asian Females vs All Others | 0.39 | 4.73 | 2.63 | -4.06 | -0.23 |
| **Total Redistribution Index** | 17.23 | 18.29 | 19.11 | 19.35 | 18.28 |

**For 2000**

| Indexes of Net Difference for: | Northeast | Midwest | South | West | Total US |
|---|---|---|---|---|---|
| White Males vs All Others | 4.25 | 2.39 | 7.75 | 12.60 | 6.53 |
| Black Males vs All Others | -16.65 | -18.78 | -22.35 | -10.29 | -19.42 |
| Hispanic Males vs All Others | -28.93 | -27.58 | -20.72 | -33.03 | -26.67 |
| Asian Males vs All Others | 11.58 | 21.61 | 19.47 | 6.29 | 13.50 |
| White Females vs All Others | 4.32 | 3.25 | 7.80 | 8.68 | 5.94 |
| Black Females vs All Others | -4.39 | -5.62 | -8.08 | -4.94 | -6.77 |
| Hispanic Females vs All Others | -17.40 | -16.09 | -12.89 | -21.43 | -16.71 |
| Asian Females vs All Others | 9.17 | 10.79 | 3.32 | 3.60 | 6.24 |
| **Total Redistribution Index** | 15.32 | 15.96 | 17.28 | 17.73 | 16.56 |